Abstract:

Method and Device for the Detection of Local Displacements and Rotations

Disclosed is a method for the detection of local displacements and rotations, wherein a sum signal and additionally a difference signal are formed from two separately generated signals of two transducer elements (W1, W2), which are spaced from each other, and subsequently the formed sum signal and the formed difference signal are OR-operated.

Also disclosed is a device for doubling the local frequency of moving incremental scales. Said device comprises an encoder (1a, 1b, 1c), a magnetically sensitive transducer (9, 13), and a signal conditioning stage (6a, 6b) electrically connected thereto. The transducer comprises at least two sensorially active functional groups synchronously using sensorially active groups or sub-groups (W_1, W_2) which are locally offset in relation to each other by a local phase φ in order to scan the moving scale, and the functional groups comprise means enabling at least two independent partial signals $S_1 = V * \sin(\omega t)$ and $S_2 = -V * \sin(\omega t) + \varphi)$ to be produced.

(Figure 2)